

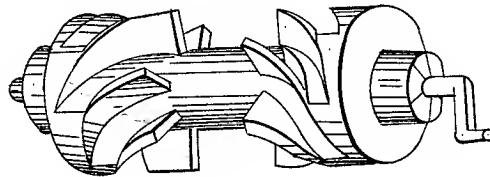
N. P. Stanton,

Water Wheel,

Nº 201.

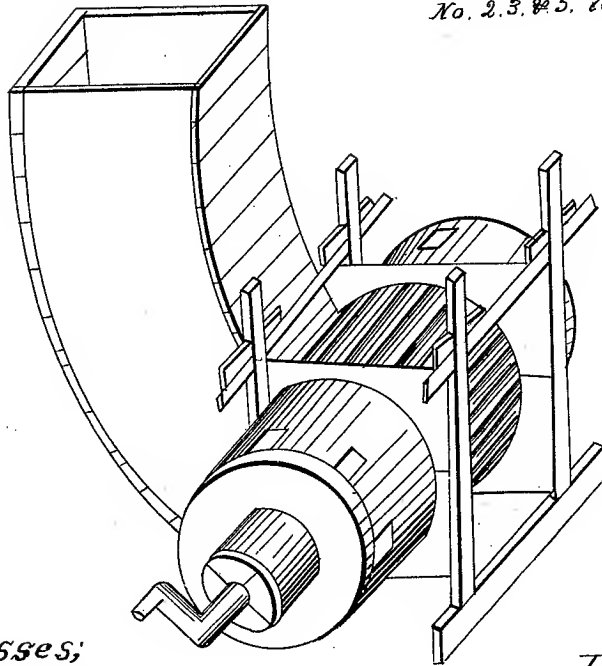
Patented May 22, 1837.

No 4.



No 1.

No. 2, 3, & 5. lost



Witnesses;

Dudley Phelps
Samuel W. Kinsman

Inventor,

Nehemiah Stanton

UNITED STATES PATENT OFFICE.

NEHEMIAH P. STANTON, OF SYRACUSE, NEW YORK.

IMPROVEMENT IN THE CONSTRUCTION OF WATER-WHEELS.

Specification forming part of Letters Patent No. 201, dated May 23, 1837.

To all whom it may concern:

Be it known that I, NEHEMIAH P. STANTON, of Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Water - Wheels; and I do hereby declare that the following is a full description of the construction and operation of the said water-wheel as invented by me.

This water-wheel is constructed of a single shaft of any length fitted to the head and fall. The diameter of the shaft is equal to the proposed diameter of the wheel exclusive of the covering of the buckets hereinafter described.

For a horizontal wheel there is a waste turned down in the center from three to six inches deep and from one to two feet long. The depth and length, however, of this waste will be proportioned to the head and fall and quantity of water. From each end of this waste buckets are cut out of the shaft in a spiral or diagonal direction or form, approaching to within about two inches of the ends of the shaft, where, by means of the regular taper upon the bottom and sides of the space cut out between the buckets, they will come to the surface; or the shaft may be turned down by a regular taper from about two inches from the ends to the waste first described, and diagonal or spiral buckets put onto the shaft where it is so tapered down each way from the waste. The number of buckets depends on the diameter of the wheel used. Over the buckets is to be made a strong covering of iron, cast or wrought, or a strong wood stave-work properly banded. Near the end of the shaft where the space between the buckets tapers to the surface of the shaft there is to be an aperture between each bucket for the discharge of the water off from one to three inches wide and from six to eight inches long proportioned to the size of the wheel and the quantity of water. The water thus introduced is discharged all around the shaft through these apertures upon the outside of the wheel. The water is introduced from the bottom of a flume through a trunk shaped like a scroll around the waste of the shaft, and is to escape between the buckets through these apertures upon the surface of the shaft at each end, as above described. It may also be introduced through

a box constructed around the waste of the wheel, which is discharged as above described. There may be more than two wheels upon a shaft making a similar waste between each two wheels, and then there will be a gate and spout or trunk letting the water into the waste between each two wheels. When the wheel is made use of with a perpendicular shaft there is but half the number of buckets that there would be on a double wheel, as before described. The buckets and the space between them are in the same form, and the water is discharged through the apertures at the upper extremity of the spaces between the buckets upon the outside of the wheel. There is a socket-box let into the lower end of the perpendicular shaft and a standing point set into the block under the bottom of the shaft on which this socket-box runs. The water is let in from the flume through a spout or trunk at a proper depth below the shaft and winding upward once round to the top of the block on which the point stands. This spout or trunk brings in the water on the favorable side of the wheel. There is to be such a case or rim round the lower part of the wheel as to prevent the water from discharging any other way than through the wheel. This wheel, whether horizontal or perpendicular, will run entirely under water as well as out. This water-wheel may be used for driving all kinds of machinery or mills where water-power is applied. It may also be used to elevate water to extinguish fires, or other purpose, by closely covering the part of the wheel where the water is discharged, and leaving it to escape through pipes or hose. The revolution of the wheel gives the water a centrifugal tendency, and the shape of the buckets and the points of escape are the most favorable for this tendency.

The invention or improvement which I claim in the above-described water-wheel is—

The construction of the diagonal or spiral tapering buckets with the discharge of the water on the extreme surface of the wheel or at the point of greatest length of lever.

Dated July 27, 1836.

NEHEMIAH P. STANTON.

Witnesses:

DUDLEY P. PHELPS,
JOHN WILKINSON.